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Sent: Wednesday, December 17, 2014 10:44 AM
To: McCaig Kris SPOK
Cc: Anne Fairbrother (afairbrother@exponent.com); Nicholas Gard - Exponent (gardn@exponent.com)
Subject: RE: Long term tox test

Kris,

In repose to your memo dated December 1, 2014, EPA has a few concerns worth noting.

The rationale given by TAI for excluding SE-TRIB-3 and SE-REF-10b as reference samples was that SE-LAL-2 was needed to provide a high total organic carbon (TOC) reference sample to represent the spectrum of site conditions. Sample SE-LAL-2 (2.67 percent TOC) is in the 98th percentile of TOC among all site samples (i.e., from the UCR downstream of the Canada-U.S. border and including internal reference samples), has a TOC greater than any site sample collected for bioassays, and is not representative of the majority of site conditions or bioassay samples. Only 2 site samples have TOC higher than SE-LAL-2 (SE-4B-C2 and SE-3B-C2) and neither of these are bioassay samples. The highest TOC among site samples used in bioassays is 2.45 percent (SE-6-B6). EPA contends that sample SE-LAL-5 (1.73 percent TOC; 88th percentile) adequately meets the objective of testing a higher TOC sample as 88 percent of sites samples have TOC at or below this concentration (93rd percentile among site bioassay samples). Moreover, we would not anticipate a difference of about 0.5 to 1 percent TOC among samples would affect responses of midge or amphipods in bioassays.

In addition, It is premature to identify the short-term toxicity tests as the primary data set for use in the Remedial Investigation in advance of completing the long-term tests. The long-term tests are being conducted to determine if UCR sediments are more toxic to benthic invertebrates when long-term exposures and/or additional endpoints are considered. To make this determination in advance of conducting the long-term toxicity tests is inappropriate and inconsistent with the sediment LOE.

That being said, EPA agrees with Teck's proposal as of December 12, 2014 for including SE-TRIB-3 and SE-REF-10b in the "Reference Samples." We do not object to samples SE-G-2 and SE-LAL-2 being run in the "Test Samples."

Laura